



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,419	09/19/2003	Craig N. Eatough	8333.CIP	7451
7590	04/22/2004		EXAMINER	
Mr. Lynn G. Foster 602 East 300 South Salt Lake City, UT 84102			DOROSHENK, ALEXA A	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/666,419	Applicant(s) EATOUGH ET AL.	
	Examiner Alexa A. Doroshenk <i>AD</i>	Art Unit 1764	<i>AD</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Proper antecedent basis in the specification for the claimed subject matter encompassing the limitations directed toward "without elutriation", "without drying", "absent elutriation", "absent washing" and "unwashed" fines should clearly be in the specification.

### *Double Patenting*

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 1-38 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 32-69 of copending Application No. 09/954,603. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

4. Claims 1-38 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 32-69 of copending Application No. 10/691,339. This is a

Art Unit: 1764

provisional double patenting rejection since the conflicting claims have not in fact been patented.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-38 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 32-69 of copending Application No. 09/954,603. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences in the claims are the point at which it is established that the fines are not washed, elutriated or dried. All of the claims address the issue of not washing, elutriating or drying of the fines in some manner and therefore, if the invention is not the same (as addressed in the statutory type double patenting rejection above), are obvious variants of each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1-38 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 32-69 of

Art Unit: 1764

copending Application No. 10/691,339. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences in the claims are the point at which it is established that the fines are not washed, elutriated or dried. All of the claims address the issue of not washing, elutriating or drying of the fines in some manner and therefore, if the invention is not the same (as addressed in the statutory type double patenting rejection above), are obvious variants of each other. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 3-5, 7, 8, 12-14, 16, 17 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claims 3-5, 8, 12-14, 16, 17 and 23 recite the limitation "the introducing act".

There is insufficient antecedent basis for this limitation in the claims.

11. Claim 7 recites the limitation "the first feeding act" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1764

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 1-6, 9-15, 17-22, 24-26 and 28-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al. (4,352,720) in view of Loebell (1,912,002).

With respect to claims 1-3, 10-12, 19, 30-33 and 36-38, Weber et al. discloses a method of producing coke comprising the steps of:

displacing a mixture of coal fines into a pyrolyzer (coking oven) (col. 2, lines 10-19);

pyrolyzing the mixture (col. 2, lines 15-17);

discharging coke (45) and by-products from the pyrolyzer (69);

separating the pyrolytic by-products by condensing means (fig. 2) into tar (31) and off gas (78);

using the tar as a binder in the mixture without discharging to the environment (col. 2, lines 43-46 and col. 7, lines 44-48); and

using the off gas as a source of fuel in the pyrolyzer without discharging to the environment (col. 7, lines 25-30).

Weber et al. does disclose wherein the fines are elutriated/washed and dried in order to form molded metallurgical grade coke from normal coal (col. 2, lines 3-20).

It has been held that the elimination of an element and its function where not needed is obvious. Ex parte Rainu, 168 USPQ 375 (PTO Bd. of App. 1969). In this instance, if one were to use briquettes taught by Loebell made up of a mixture of coal fines and coke fines and binder material (p. 1, lines 1-11) which are formed without elutriating/washing and drying and have coking properties at the operating temperatures of Weber et al. (p. 4, lines 65-104 and p. 2, lines 58-61) it would be possible to eliminate the steps of elutriating/washing and drying of the fines in Weber et al. and have Weber et al.'s remaining elements perform the same functions as before. It would have been obvious to one of ordinary skill in the art at the time the invention was made to element the elutriating/washing and drying steps of Weber et al. when the briquettes of Loebell are used as the starting material.

With respect to claims 4, 13 and 20, Weber et al. discloses wherein coal is crushed prior to introducing (col. 6, lines 1-4).

With respect to claims 5, 14 and 21, Weber et al. discloses wherein the mixture is formed into solid objects prior to introducing (col. 6, lines 21-40).

With respect to claims 6, 15 and 22, Weber et al. discloses wherein the coke is discharged as solid objects (molded coke) (col. 6, lines 31-40).

Art Unit: 1764

With respect to claims 17 and 24, Weber et al. discloses wherein tar is fed back to the mixture prior to introducing (col. 2, lines 43-46 and col. 7, lines 44-48).

With respect to claims 9 and 18, Weber et al. discloses wherein separating comprises cooling of pyrolytic by-products by condensing means (fig. 2) into tar (31) and off gas (78).

With respect to claims 25 and 26, Loebell discloses the claimed weight percent ranges of coal and coke (p. 4, lines 86-114).

With respect to claim 28, Weber et al. discloses wherein the pyrolyzing act comprises heating within the range of 800-1100°C (col. 2, lines 47-49).

With respect to claim 29, Weber et al. disclose the temperatures of only portions of the cooling system (fig. 2), but it is held that any temperature sufficient to produce tar would have been obvious to one of ordinary skill in the art without undo experimentation and therefore the cooling temperature is held an a result effective variable.

As such, without showing unexpected results, the claimed temperature can not be considered "critical". Accordingly, one having ordinary skill in the art at the time the invention was made would have routinely optimized the cooling temperature to produce tar and obtain desired rate and efficiency of operation. *In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980). And since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art.

With respect to claim 34, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize all of the tar as binder and all of the



Art Unit: 1764

off gas as fuel in order to efficiently use the products of the reaction as well as to avoid releasing any products into the environment.

With respect to claim 35, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use condensed tar as the sole binder source and off-gas as the sole fuel for the pyrolyzer since both are sources the most readily available binder and fuels since both are products of the reaction, as well as being economical and environmentally sound method of product use.

14. Claims 7, 8, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al. (4,352,720) in view of Loebell (1,912,002) as applied to claims 33, 42 and 50 above, and further in view of Nicaud et al. (6,043,289).

With respect to claims 7, 8, 16 and 23, Weber et al. discloses combining separated tar (col. 2, lines 43-46 and col. 7, lines 44-48), a binder (bitumen) (col. 7, lines 44-48) and fines mixture (col. 2, lines 10-11) in the introducing act, but is silent as to if synthetic binder is used.

Nicaud et al. teaches wherein the characteristics of the conventionally obtained binder bitumen are close to those of synthetic bitumen (col. 2, lines 38-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to select either conventionally obtained bitumen or synthetic bitumen as it is merely the selection of functionally equivalent binders known to the art. Additionally, Weber et al. does not preclude one from using a synthetic binder.

Art Unit: 1764

15. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al. (4,352,720) in view of Loebell (1,912,002) as applied to claim 50 above, and further in view of Deering et al. (4,530,752).

With respect to claim 27, Weber et al. in view of Loebell disclose wherein coke breeze can be used as a feed (Loebell p. 1, lines 8-9) but fail to disclose a particular weight percent for when coke breeze is used. Deering et al. teach wherein coke breeze (fines) comprises 5-10% weight of the feed mixture for a pyrolysis system (col. 8, lines 58-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the appropriate weight percent of coke breeze, as taught by Deering et al. in order to have an operable pyrolysis occur.

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa A. Doroshenk whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alexa Doroshenk  
Patent Examiner  
Art Unit 1764

April 15, 2004